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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/652,498

09/02/2003

Randolf Von Oepen

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01/05/2010

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EXAMINER

PELLEGRINO, BRIAN E

ART UNIT

PAPER NUMBER

3738

MAIL DATE

DELIVERY MODE

01/05/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/652,498	<b>Applicant(s)</b> VON OEPEN, RANDOLF	
	<b>Examiner</b> Brian E. Pellegrino	<b>Art Unit</b> 3738	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,8,10,16,21,23,24 and 30-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,8,10,16,21,23,24 and 30-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/15/09 has been entered.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3,8,10,21,23,24,30-33,35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinchuk et al. (EP 861638) in view of Lunn (5476506). Pinchuk can be said to illustrate (Figs. 8-11) a stent **100** that is flared and can be considered as a substantially cylindrical deformable stent to extend over a balloon catheter. Pinchuk also discloses the stent has a graft (which is well known in the art to be liquid impermeable), col. 7, line 49. Pinchuk additionally discloses (Fig. 11) an independent stiffening element **105'** can be used to form a section of reduced expandability **106'**. However, Pinchuk et al. do not show the arrangement of the stent with the catheter having the balloon being configured and arranged to expand said stent to have a first substantially cylindrical fixing portion having an outer diameter associated with fixing said stent within the vessel, a first tapered portion connected to and extending inwardly

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and distally from said first substantially cylindrical fixing portion, a substantially cylindrical middle portion connected to and extending from said first tapering portion, said middle portion having a middle diameter smaller than said outer diameter, a second tapered portion connected to and extending outwardly and distally from said middle portion, and a second substantially cylindrical fixing portion, having said outer diameter, connected to and extending distally from said second tapered portion, said first and second tapered portions having predetermined lengths and angles and extending from said middle diameter to a first junction of said first fixing portion and said first tapered portion at said outer diameter and a second junction of said second fixing portion and said second tapered portion at said outer diameter. Lunn teaches a balloon catheter **40** as claimed having a first substantially cylindrical section **48** that tapers inward to a reduced diameter section which then tapers outward to a second substantially cylindrical section **46**, see Fig. 5D. Lunn also teaches to use the catheter with a vascular prosthesis having stent fixing portions of a flared construction as claimed. It would have been obvious to one of ordinary skill in the art to use the balloon catheter of Lunn with the stent of Pinchuk et al. such that it is appropriately expanded to the site of repair and properly deployed since it is designed to deliver such a stent construction. Regarding claims 2,3,8,21,35 Pinchuk et al. disclose graft material is a “foil” of body-tolerated material, such as the polymer PTFE, col. 1, lines 48-50. With respect to claims 10,23,24,32,33 Pinchuk also discloses that stiffening the midsection or segments of the apparatus is accomplished by placing rings about the surface of the stent and can be accomplished in a secondary process such as bonding, col. 7, lines 10-16,21-24. Regarding claims 36,37, the flared ends of the stent or “fixing portions” are configured to achieve blood

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throttling in the vessel and the tapered portions are configured to minimize blood turbulence in the vessel.

Claims 16,34,38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinchuk et al. (EP 861638) in view of Lunn '506 as applied to claims 1,30 above, and further in view of Crocker et al. (5843116). Pinchuk in view of Lunn is explained supra. However, Pinchuk as modified by Lunn fail to disclose the stiffening elements are within the balloon segments in the reduced diameter section. Crocker et al. show (Fig. 3) that stiffening material is integrated into balloons to limit the expansion of the balloon in certain areas, col. 5, lines 29-49. Crocker also teaches bonding, col. 6, lines 8-10. It would have been obvious to one of ordinary skill in the art to use the teaching of Crocker et al. that stiffening material can be incorporated into balloons and place the stiffening elements of Pinchuk et al. within the balloon of Lunn such that the elements are non-obtrusive and do not become unattached since Pinchuk taught separate elements. It would be an obvious expedient to eliminate the risk of stiffening elements from detaching during use of the apparatus by integrating them in the balloon.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1,30 have been considered but are moot in view of the new ground(s) of rejection.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian E. Pellegrino whose telephone number is 571-272-4756. The examiner can normally be reached on M- F (7am-5:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott can be reached on 571-272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TC 3700  
/Brian E Pellegrino/  
Primary Examiner, Art Unit 3738